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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,680	06/29/2001	Brad A. Armstrong	29	8703

7590 12/01/2005

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EXAMINER
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COBURN, CORBETT B

ART UNIT	PAPER NUMBER
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3714

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/896,680	ARMSTRONG, BRAD A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Corbett B. Coburn	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-51 and 54-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-51 and 54-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 6-17, 20-24, 30-31, 39, 42, 50, 51 & 54-56 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious Japanese Unexamined Utility Model Application Publication No. 5-87760 to Furukawa ("Furukawa").

In regard to claims 1-3, 6-7, 16-17, 20, 23, 30-31, 39, 50, 51 & 54-56, Furukawa teaches a game machine capable of driving a display apparatus (8:0011 hereinafter the notation relates to "page num: paragraph num"), a game controller housing a four-way rocker and a plurality of player depressible buttons that are useable with two hands (Fig. 1), pressure sensitive sensors contained in the controller housing for detecting operator input and generating an analog representation of the force used (5:0006-0007), a means for outputting pressure sensitive signal to game machine (Fig. 1), electrodes disposed on a substrate (7:0009), a rubber dome cap positioned over electrodes (Fig. 2 and 3) that is depressible with applied pressure (3:0002), the dome cap having a convex shaped portion (Fig. 2 and 3), and the dome cap having an underside convex extrusion over electrodes (Fig. 2 and 3).

Applicant has amended the claims to indicate that the circuit trace material is supported under a sheet. Examiner interprets this sheet to be the elastomeric material used to make the resilient dome. Clearly, Furukawa teaches such a sheet.

Furukawa clearly teaches buttons 19 & 20 on the right side of the controller. Since the only switches discussed in the reference are analog switches such as those depicted in figures 2 and 3, Examiner believes these switches to be analog. Furthermore, the reference specifically teaches that the use of analog switches is not restricted to the cross key (12). (7:0013-0015) Thus Examiner asserts that the right-side buttons (19 & 20) are analog buttons.

Even if we assume that the buttons shown in the reference are not necessarily analog, it would have been obvious to one of ordinary skill in the art at the time of the invention to have made them analog. Use of analog buttons is clearly well known in the art. It is also well known that the fewer types of parts used to assemble a controller, the lower the cost of manufacture. Furukawa teaches the use of analog buttons in one part of the controller. It would keep manufacturing costs down to use the same type of button throughout. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used analog buttons on the right side (as well as the left side) in order to reduce manufacturing costs.

In regard to claims 8, Furukawa teaches a dome cap positioned over a first and second circuit trace, where the circuit traces are in close proximity to another (Fig. 2-3).

In regard to claim 9, Furukawa teaches conductive material positioned to contact circuit traces with applied pressure (Fig. 2).

In regard to claims 10 and 31, Furukawa teaches a convex portion positioned to press against circuit trace material (Fig. 2-3).

In regard to claim 11, Furukawa teaches the convex portion is deformable with pressed against circuit trace material (5:0007).

In regard to claim 12, Furukawa teaches a left and right hand area of the housing (Fig. 1).

In regard to claim 13 and 42, Furukawa teaches a four-way rocker exposed in the left hand

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area (Fig. 1).

In regard to claims 14-15, Furukawa teaches four analog sensors associates with the four-way rocker, where each section of the rocker has the resilient dome cap (6:0009).

In regard to claims 21-22, Furukawa teaches four analog sensors, which allows at least one device and one electricity-manipulating device to be separate and one device to be a single device.

In regard to claim 24, Furukawa teaches variable conductance according to the degree of pressing force (5:0007).

***Claim Rejections -35 USC 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-5, 18-19, 25-29, 32-38, 40-41, and 43-47, are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa as applied to claims 1-3, 6-17, 20-24, 30-31, 39, and 42 above, and further in view of Japanese Unexamined Patent Application Publication No.7-302159 to Terajima et al, ("Terajima").

In regard to claims 18, 25-26, 32-36, and 43-44 Furukawa teaches the limitations as discussed above, but does not expressly teach contact electrode design layout. Terajima teaches interdigitated circuit traces where different level of pressure causes more surface area of the convex button underside to contact additional circuit traces (Fig. 10). One would be motivated to modify Furukawa to use interdigitated circuit traces to insure that different level of pressure exerted on the convex button underside would allow the pressure variance to be detectable and

useable as additional input. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Furukawa to use the interdigitated circuit traces taught by Terajima as another method for guaranteeing pressure sensitive input.

In regard to claim 19, Furukawa in view of Terajima teaches the limitations as discussed above including a plurality of buttons disposed on the right hand side of the game controller, but does not teach at least four buttons in the same area. However, the exact number of buttons lacking criticality, duplication of that which is known in the art is considered well within the capabilities of one of ordinary skill. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have at least four buttons disposed in the controller to increase the player input convenience.

In regard to claims 27-29, Furukawa in view of Terajima teaches the limitations as disclosed above. Additionally, Terajima teaches an active integrated circuit for converting analog data to digital data (Fig. 5). The converter serves to define a micro-controller and an ASIC.

In regard to claims 37-38, 40-41, 45, and 47, Furukawa in view of Terajima teaches the limitations as disclosed above, but is silent with respect to the appendage intended for use with the handheld controller. However, the specific appendage used to operate the handheld controller, lacking criticality, would not serve to further limit the device or provide distinctness over existing prior art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow an operator use any appendage to operate device controls.

In regard to claim 46, Furukawa in view of Terajima teaches the limitations as disclosed above and additionally Terajima teaches a deformable surface having an apex (Fig. 10).

***Double Patenting***

5. The terminal disclaimer filed on 31 October 2005 disclaiming the terminal portion of any patent granted on this application that would extend beyond the expiration date of US Patent Number 6,343,991 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Response to Arguments***

6. Applicant's arguments filed 31 October 2005 have been fully considered but they are not persuasive.

7. With regard to the Information Disclosure Statement of 1 November 2004: The previous office action was not intended as a "suggestion" that Applicant provide the prior art listed thereon. Applicant submitted an IDS that contained these foreign references. Presumably, Applicant believed them to be material to the question of patentability. Applicant, therefore, has a duty to not only disclose the existence of these references, but also to provide a copy to the office. If Applicant fails to do so, this might result in unfortunate consequences in the event that the patent issues and is litigated.

8. Applicant argues that the buttons on Furakawa's controller are not "discrete". According to the Merriam Webster's Collegiate Dictionary (10<sup>th</sup> Edition, ©1997), discrete means: consisting of a separate entity, individually distinct. Furakawa's controller buttons (12, 19 & 20) are clearly individually distinct and, therefore, "discrete".

9. Applicant asserts that Furakawa's right-hand buttons (19 & 20) are not analog. Applicant bases this conclusion on a misunderstanding of Furakawa. While Furakawa does indeed discuss digital (i.e., on/off) switches, Furakawa makes it clear that these switches are not the switches

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that are used in Furakawa's invention. Furakawa states that these switches do not allow an operator to freely control a video game. (Paragraph 0004) Since Furakawa's invention is a controller for a video game, it would not make sense for Furakawa to use switches that are not suitable for allowing the operator to control a video game. Furthermore, even if Furakawa fails to teach analog switches, it would have been obvious to use analog switches for the reasons outlined above.

10. Applicant argues that Sony is an industry leader and since they do not choose to question the patentability of this application, the Office should issue a patent. Sony is not charged with applying the patent laws of the United States – the United States Patent and Trademark Office is. Whether Sony does or does not believe the claimed invention to be patentable is completely immaterial.

11. Applicant's brevity is greatly appreciated.

### ***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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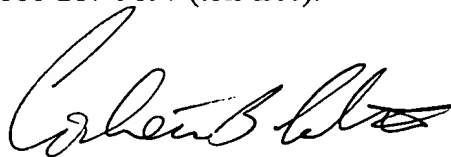
however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corbett B. Coburn whose telephone number is (571) 272-4447.

The examiner can normally be reached on 8-5:30, Monday-Friday, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Corbett B. Coburn  
Examiner  
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